

WHAT IS CLAIMED IS:

- 1                   1.       A multistep method of polishing a semiconductor substrate with  
2       a polishing fluid to remove a selected amount of material from said substrate, said  
3       method comprising:  
4                    polishing said substrate to remove a first portion of said selected amount  
5       of material by holding said substrate against a polishing pad with a polishing force  
6       while applying a polishing solution to said polishing pad;  
7                    rinsing said polishing pad with a rinsing fluid; and  
8                    polishing said substrate to remove a second portion of said selected  
9       amount of material by holding said substrate against said polishing pad with a polishing  
10       force while applying said polishing fluid to said polishing pad.
- 1                   2.       The method of claim 1 wherein said polishing fluid is an  
2       unstable polishing fluid.
- 1                   3.       The method of claim 1 wherein said first portion and said second  
2       portion equal said selected amount.
- 1                   4.       The method of claim 2 wherein said unstable polishing fluid is  
2       mixed in a point of use mixing system prior to applying said polishing solution to said  
3       polishing pad.
- 1                   5.       The method of claim 1 wherein said rinsing fluid comprises  
2       deionized water.
- 1                   6.       The method of claim 1 wherein said rinsing is done while said  
2       substrate is held against said polishing pad with a 0 psi force.
- 1                   7.       A multistep method of polishing a semiconductor substrate in an  
2       inline polishing that includes at least first and second polishing stations, wherein said  
3       first polishing station includes a first polishing pad and said second polishing station  
4       includes a second polishing pad, said method comprising:  
5                    transferring said substrate to said first polishing;

6 polishing said substrate to remove a first portion of material by holding  
7 said substrate against said first polishing pad with a polishing force while applying a  
8 first polishing solution to said first polishing pad;  
9 rinsing said first polishing pad with a rinsing fluid;  
10 polishing said substrate to remove a second portion of material by  
11 holding said substrate against said first polishing pad with a polishing force while  
12 applying said first polishing fluid to said first polishing pad;  
13 transferring said substrate to said second polishing station; and  
14 polishing said substrate to remove a third portion of material by holding  
15 said substrate against said second polishing pad with a polishing force while applying a  
16 second polishing solution to said second polishing pad.

1 8. The method of claim 7 wherein said polishing fluid is an  
2 unstable polishing fluid.

1 9. The method of claim 7 wherein said first portion and said second  
2 portion equal said selected amount.

1 10. The method of claim 8 wherein said unstable polishing fluid is  
2 mixed in a point of use mixing system prior to applying said polishing solution to said  
3 polishing pad.

1 11. The method of claim 7 wherein said rinsing fluid comprises  
2 deionized water.

1 12. The method of claim 7 wherein said rinsing is done while said  
2 substrate is held against said polishing pad with a 0 psi force.

1 13. The method of claim 7 wherein said substrate is transferred to  
2 and polished at said second polishing station before being transferred to and polished at  
3 said first polishing station.